Draft Final

Site Specific Chemical Warfare Materiel Scoping and Security Study Report

Formerly Used Defense Sites Site Inspection Report

Prepared for:

U.S. Army Engineering and Support Center Huntsville

Contract No. DACA87-00-D-0038
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Prepared by:
PARSONS

South Atlantic Division Properties

March 25, 2005
742675

CWM Burial Site, Manchester

FUDS No. I04GA098000

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CHAPTER 1
INTRODUCTION

1.1. BACKGROUND

In accordance with Defense Environmental Restoration Program (DERP) guidance and project initiation requirements under the Formerly Used Defense Site (FUDS) program, the U.S. Army Corps of Engineers South Atlantic Division (CESAD) prepared an Inventory Project Report (INPR) to determine whether the former Chemical Warfare Materiel (CWM) Burial Site, Manchester, Georgia is eligible as a FUDS. The former CWM Burial Site was included in the inventory of FUDS as a site potentially containing CWM. The FUDS project number for the former CWM Burial Site is I04GA098000.

1.2. PROJECT OBJECTIVE

1.2.1. The objectives of the CWM Scoping and Security Study (CWM Study) are to prioritize the FUDS eligible suspect CWM project properties (suspect CWM sites) for future funding and actions; involve the public, federal, state, tribal, and local stakeholders in the decision process for determining potential further action; and identify security and safety concerns. As discussed in the CWM Scoping and Security Study Report, the process for evaluating the suspect CWM sites was developed in a manner consistent with FUDS Program Policy (ER 200-3-1) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process guidance and provides for a phased approach for determining which sites require further investigation.

1.2.2. This Site-Specific CWM Scoping and Security Study Report serves as the Site Inspection (SI) Report for the former CWM Burial Site. The SI Report addresses the safety and security issues regarding the past use of CWM and makes recommendations based on the available information and from previous investigations conducted at this site. The recommendations and associated costs to complete the work at the site, along with the information collected at the other suspect CWM sites, will be used to develop a comprehensive management plan for non-stockpile CWM at FUDS.

CHAPTER 2
SITE DESCRIPTION

2.1. SITE LOCATION

The CWM Burial Site is located within a railroad wye owned by CSX Transportation, Inc. in the city of Manchester, which is located roughly halfway between Atlanta and Columbus, Georgia. The general location of the former CWM Burial Site is presented on Figure 2.1.

2.2. PHYSICAL DESCRIPTION

The primary feature of the former CWM Burial Site is the rail yard of the CSX Railroad Company in Manchester, Georgia. The surrounding area includes the city of Manchester with a population of 22,410 and an area of 5.6 square miles in 1990.

2.3. HISTORY AND PAST USE

2.3.1. History

2.3.1.1. During rail movement of CWM to Huntsville Arsenal, Alabama in June 1946, a train car was discovered to be leaking liquid mustard (H). The car was left at a wye in the tracks in Manchester, Georgia until Chemical Warfare Service (CWS) personnel could correct the situation.

2.3.1.2. On June 26, 1946, one leaking mustard bomb from a shipment of eighty-four German 500-kg (nominally 1,000-lb) mustard bombs was discovered in the car by the detail sent from Edgewood Arsenal, Maryland. About 20 bombs had to be unloaded before the leaking bomb was located. The bomb case had a break in the seam running lengthwise and most of the mustard agent had splashed from the bomb and had soaked into the floor and door of the car.

2.3.1.3. The mustard agent remaining in the bomb was neutralized by mixing it with 200 pounds of bleach and buried at a depth of 6 to 7 feet at the railroad yard in Manchester, Georgia. The bomb was not buried since it contained an explosive burster. The bomb casing was decontaminated with DANC (Decontaminating Agent, Non-Corrosive) and slurry and transported to Huntsville Arsenal, Alabama. The floor of the contaminated car was also decontaminated using DANC and slurry. Outside surfaces of the car were decontaminated by use of DANC. After completing the decontamination

operation, men of the decontamination detail noticed the effects of vapor in the eyes and throat. The officer and 6 men were admitted to the Fort Benning Hospital on June 27, 1946.

2.3.1.4. On September 30, 1946, the burial site was excavated to a depth of 10 feet by a detail sent from Edgewood Arsenal, Maryland. Although a weak odor of mustard was present in a small quantity of the soil removed, tests with the M-9 Detector Kit failed to detect the presence of mustard agent. Nevertheless, the potentially contaminated soil was decontaminated by mixing with 200 pounds of bleach and the hole refilled. Records stated that the area was completely free of mustard agent and no possible danger existed. Site history information is based primarily on original reports written by the decontamination details in 1946 that were included in the Chemical Investigation Report (CIR), dated September 1993.

2.3.2. Previous Investigations

The U.S. Army Corps of Engineers, St. Louis District prepared an INPR in February 1993 and a Chemical Investigation Report (CIR) for the CWM Burial Site in September 1993. The CIR was conducted after the Inventory Project Report prepared by U.S. Army Corps of Engineers, Savannah District established the CWM Burial Site as a "no further action" site. Preparation of the CIR included a site visit, research at various archives and records holding facilities, and interviews with individuals associated with the site or familiar with its operations. The CIR findings are summarized in Section 3 of this document.

2.3.3. Past Property Use

Prior to the burial and destruction of the mustard, the site was used as a service yard and rail junction by the Atlantic Coast Line.

2.4. CURRENT AND FUTURE USE

2.4.1. Current Use

The railroad in Manchester, Georgia is currently owned by CSX Transportation, Inc. The location of the CWM Burial Site is in the rail yard and is currently covered with brush and uncut grass.

2.4.2. Future Use

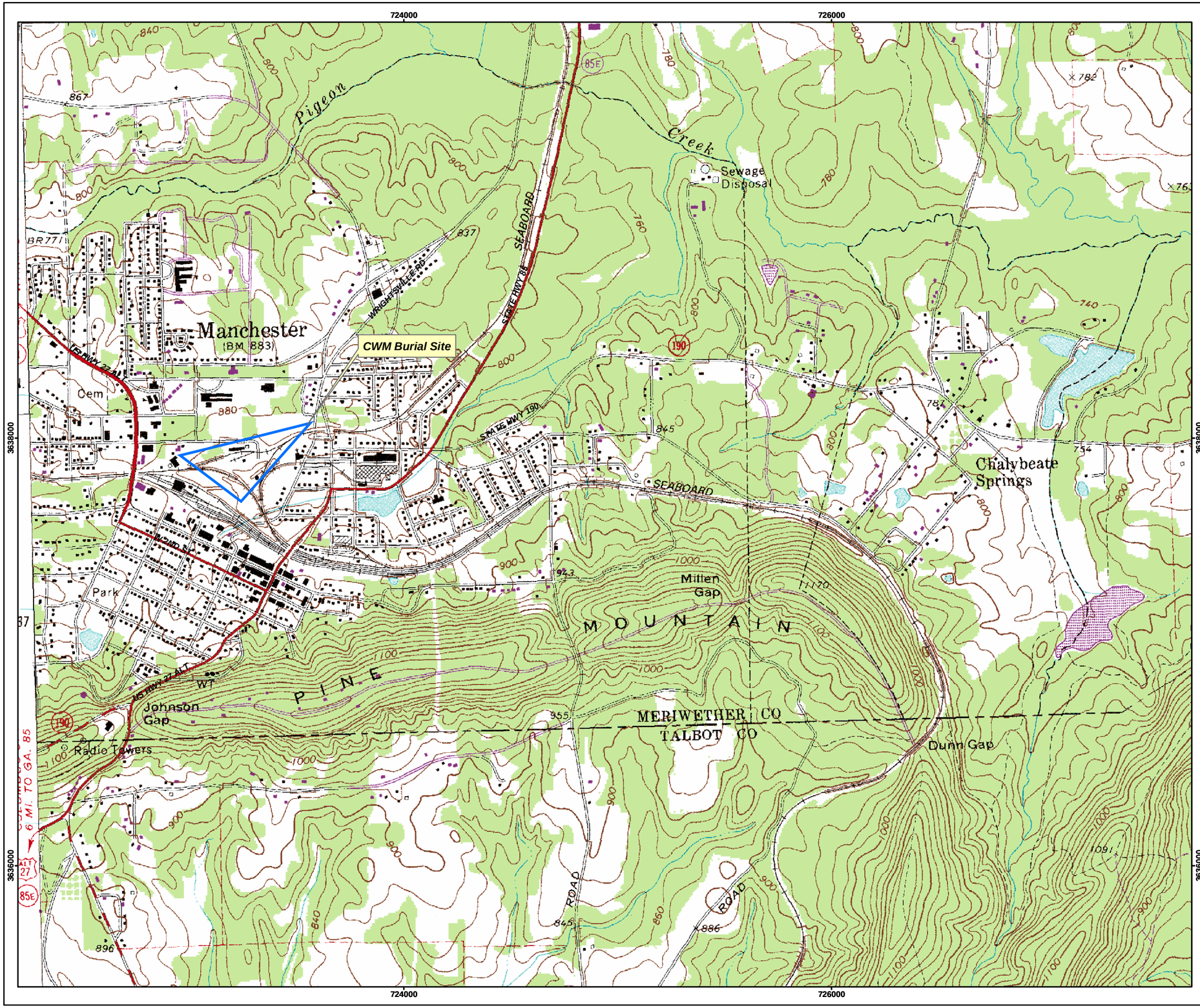
This site is expected to continue in its current use in the future.

Figure 2.1

CWM Burial Site

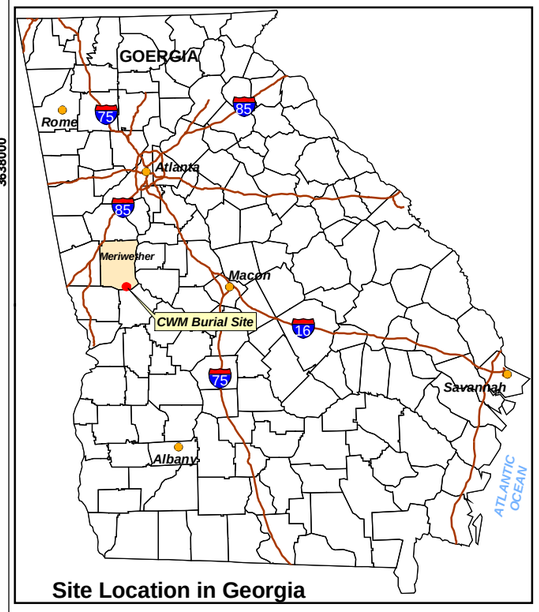
Manchester, Georgia

For Official Use Only



Legend

Approximate Site Boundary



Site Location in Georgia

N

Image Source: USGS 7.5' Manchester Quadrangle, 1985.

Projection: UTM Zone 16 NAD83, Map Units in Meters, Distance Units in Feet.

1,500 750 0 1,500 Feet

PARSONS	U.S. ARMY CORPS OF ENGINEERS HUNTSVILLE CENTER

DESIGNED BY: BT	CWM Burial Site		
DRAWN BY: BT		SCALE: As Shown	PROJECT NUMBER: 742675
CHECKED BY: JC		DATE: September 2004	PAGE NUMBER:
SUBMITTED BY: JC		FILE: X:\CWM_GIS\GIS\Maps\Manchester\Fig2_1.mxd	

CHAPTER 3
SITE EVALUATION

3.1. INTRODUCTION

3.1.1. The CWM Study process for evaluating and characterizing the sites consists of a phased approach for determining which sites require further action. This approach is consistent with the Preliminary Assessment (PA) and Site Inspection (SI) phases of the CERCLA process. The approach is detailed in Chapter 4 of the CWM Scoping and Security Study Report.

3.1.2. The PA consists of historical records review, limited aerial photographic analysis, and site data collection. If the PA indicates further investigation is warranted, the site is evaluated in the next step of the process, the SI. The SI may involve a site visit and surface inspection, mapping and spatial analysis, additional aerial photographic analysis, interviews with current landowners and local officials, and if warranted and feasible, geophysical surveys, intrusive investigation, and limited munitions constituent sampling. Based on the results of this additional evaluation, an appropriate response action is recommended.

3.2. HISTORICAL RECORDS SUMMARY

3.2.1. Records review for the CWM Burial Site consisted of reviewing the INPR, the Chemical Investigation Report (CIR), dated September 1993 and the list of TEU Movement Records. Figure 2.1 shows the location of the CWM Burial Site.

3.2.2. A site visit was conducted as part of the CIR on February 24, 1993 by the U.S. Army Corps of Engineers, Savannah District. The site visit team went to the site and did not observe any signs of hazardous conditions. In addition, they interviewed William T. Smith, a local resident and railroad company official for over 40 years, who was a witness to the decontamination operation in 1946. Mr. Smith was not aware of any hazardous effects to humans, animals or vegetation during the years following the decontamination. Another site visit was conducted on May 19, 1993 as part of the CIR investigation. The following observations were made:

- The sign that marked the burial pit had been removed,
- Due to grading of the area inside the railroad wye, no surface indications of the burial pit remained, and

- No stressed vegetation was observed that might indicate remaining contamination.

3.2.3. The CIR concluded that based on historical documents, air photo interpretation, interviews with people familiar with the site, and a site inspection, there does not appear to be any CWM remaining at the CWM Burial Site.

3.3. SITE INVESTIGATION PERFORMED

No site investigations were performed at the CWM Burial Site as part of this evaluation. The data collected from the previous investigation was sufficient to determine that no further investigation was necessary in order to determine whether CWM was suspected to remain at the site.

3.4. SOURCE, NATURE AND EXTENT OF CWM

The results of the SI indicate that CWM in the form of mustard agent was neutralized and buried at this location. Records regarding the incident are complete, and show that the potentially contaminated soil was excavated and tested. The results showed the soil was free of mustard agent and the hole was refilled. Evidence also shows that the bombshell that had contained the mustard was loaded back onto the railcar and shipped to Huntsville Arsenal for disposal.

3.5. RISK EVALUATION

3.5.1. The potential for a CWM safety risk depends on the presence of three critical elements: a source (presence of CWM), a receptor, and an interaction between source and receptor. There is no risk if any one of these three elements is missing.

3.5.2. This site no longer presents a hazard with respect to CWM. Documentation is available that the mustard agent was properly decontaminated in the first instance and was decontaminated a second time several months later. The basis for this is as follows:

- The mustard agent that was buried at the CWM Burial Site in Manchester, Georgia represented only a small portion of the contents of a 500-kg German bomb.

- The mustard agent that was buried was mixed with a large amount of decontaminant. The bomb casing was not buried.

- Several months later, the pit was re-excavated and the soils were decontaminated a second time.

- No evidence of mustard agent was discovered on subsequent visits to the site.

A relative risk scoring is provided in Chapter 8 as part of the site prioritization.

3.6. SECURITY EVALUATION

The security risk for the former CWM Burial Site is based on the possible types of CWM present, location, if present, and the accessibility. The site presents a low security risk based on the facts that CWM would consist of uncontained agent that has been decontaminated twice and access is restricted by the rail yard. Chapter 7 provides a security risk scoring and a more detailed discussion.

3.7. PUBLIC INVOLVEMENT

As part of this document, a fact sheet for the site has been prepared to provide information to stakeholders and the public and is included in the Appendix.

CHAPTER 4
RECOMMENDED ACTIONS

4.1. INTRODUCTION

4.1.1. The following potential actions were evaluated to determine the next step::

- Further Action:
  - SI;
  - Removal Response;
  - Remedial Investigation/Feasibility Study (RI/FS);
    - Independent RI/FS
    - Programmatic RI/FS
  - Remedial Action; and
  - Long-term Management (LTM).
- CWM Project Closeout (PCO).

4.1.2. The CWM Scoping and Security Study Report provides a description of each action. The text below provides the recommended action for the former CWM Burial Site. Figure 4.1 shows the site evaluation flowchart for former CWM Burial Site.

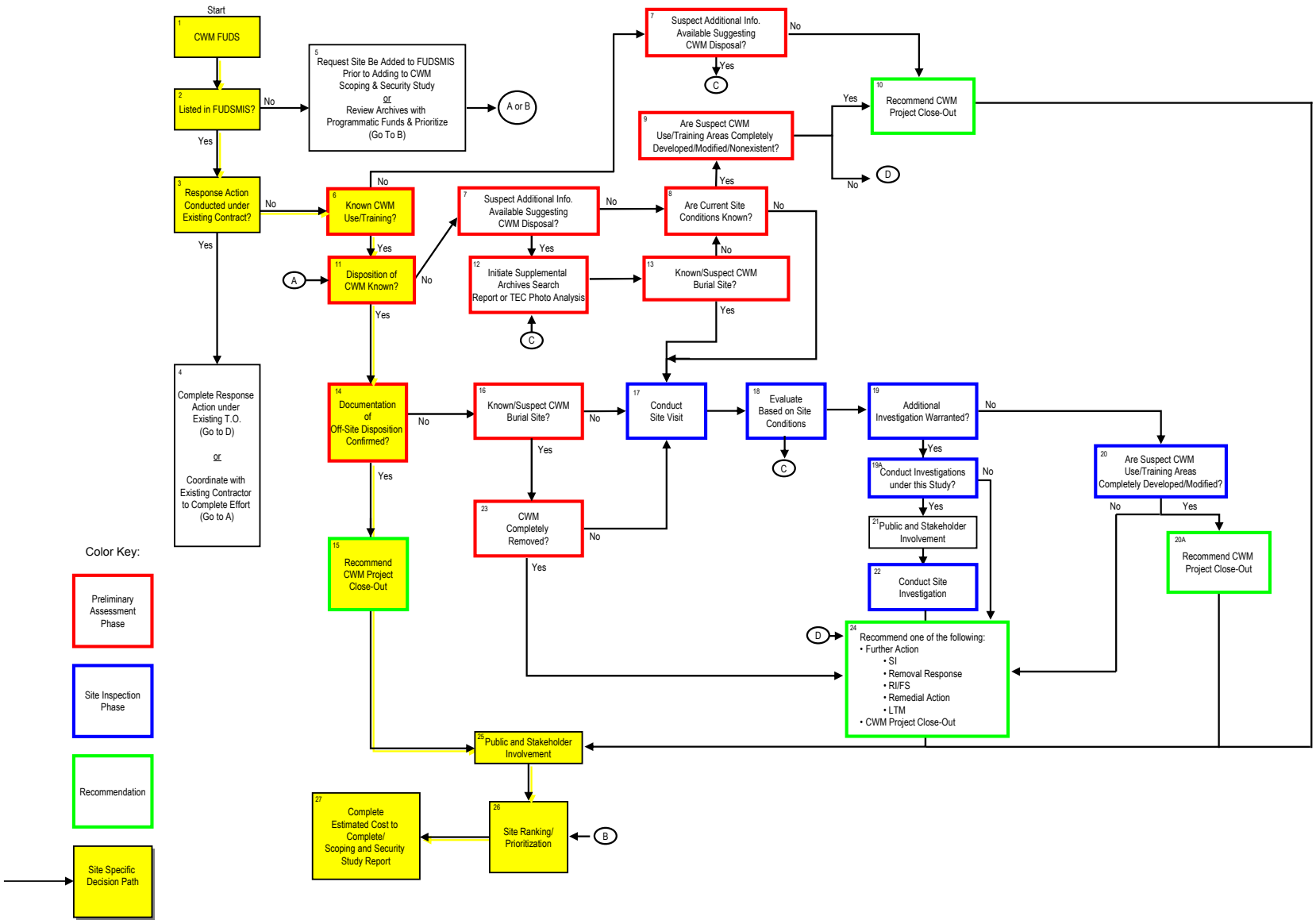
4.2. RECOMMENDATIONS

4.2.1. Beyond the burial area, other areas of potential CWM contamination were not identified during the investigations at former Manchester CWM Burial Site. Nor is there any documented record or knowledge concerning discovery of CWM during previous activities at these areas. Detailed records for the CWM Burial Site include information on the final disposition of the bombshell and the decontamination procedures followed when burying the agent. The documents show that former CWM Burial Site has no sources of CWM.

4.2.2. Based on SI findings and current site conditions, further investigation of the former CWM Burial Site beyond the SI phase of the evaluation process is not warranted. There is no identifiable definitive source of contamination; therefore, there are no potential pathways of exposure and thus, no risk to human health or ecological receptors.

4.2.3**.** The recommendation for the former CWM Burial Site is PCO and removal from the project inventory for CWM. The PCO recommendation pertains only to CWM concerns at the site and does not address other potential hazards that may require further action. In the event that CWM contamination is found in the future, USACE will re-evaluate the site status and implement the appropriate response action.

Figure 4.1 Former CWM Burial Site Evaluation Decision Flowchart



CHAPTER 5
PROJECTED WORK TO COMPLETE

Investigation of the former Manchester CWM Burial Site is considered complete at this time based on all currently available site data. Information indicates that CWM was present at the site but no information could be found indicating that it remains at the site.

5.1. CWM PROJECT CLOSEOUT

As described in Chapter 6 of the CWM Scoping and Security Study Report, the PCO procedure will involve formal state regulatory concurrence and stakeholder coordination. Stakeholders include property owners and local officials. PCO will consist of issuing a public notice of the recommendation, contacting local officials and property owners, and sending a letter to regulators for concurrence. This site-specific report, along with a letter of concurrence signed by the District Commander, will be submitted to the state regulatory agency and to all of the identified stakeholders. If it is determined that the Manchester CWM Burial Site no longer poses a risk, PCO will be achieved.

5.2. SCHEDULE TO COMPLETE

The proposed PCO will be completed in Year 1.

CHAPTER 6
COST-TO-COMPLETE

6.1. INTRODUCTION

The USAESCH was tasked to develop a cost-to-complete for each suspect CWM site under this study. This Chapter provides the estimated cost-to-complete the project as defined by the scope of work recommended in Chapter 5. Costs are provided based on the assumptions defined in the Chapter 6 of the CWM Scoping and Security Study Report. The factors that were included in the costs are listed below.

6.2. COST BASIS

6.2.1. Standard costs, discussed in Chapter 7 of the CWM Scoping and Security Study Report were used to create the estimated cost-to-complete for this site. Table 6.1 shows the costs for the various work activities.

6.2.2. The estimated costs include funding for the contractors and the USACE. The prime contractor will coordinate, conduct, and document all of the activities for the public meeting. It is assumed that the USACE work will be managed by the USAESCH with support for document review, stakeholder involvement, and meetings by the USACE District.

6.3. COST-TO-COMPLETE SUMMARY

The total cost-to-complete for PCO at the CWM Burial Site is estimated to be $31,800. The detailed costs are provided in the Appendix to this Volume II report. Table 6.1 provides a summary of the cost broken down by phase. The primary uncertainties in the cost estimate are:

- Variability in the cost of executing the activities planned including the estimate for inflation, economic factors, and regulatory changes.

Table 6.1
Estimated Cost-to-Complete
CWM Burial Site, Manchester, Georgia

Phase	Phase Description	Contractor Cost	Government Cost						Task Total Cost
			Huntsville	District	TEU	ECBC	USATCES	USACHPPM	
RI/FS	**Remedial Investigation and Feasibility Study**	$0	$0	$0	$0	$0	$0	$0	$0
RD	**Remedial Design**	$0	$0	$0	$0	$0	$0	$0	$0
RA-C	**Remedial Action - Construction**	$0	$0	$0	$0	$0	$0	$0	$0
LTM	**Long Term Management**	$0	$0	$0	$0	$0	$0	$0	$0
PCO	**Project Close-out**	$8,000	$5,600	$18,200	$0	$0	$0	$0	$31,800
CTC	**Total Cost-To-Complete**	**$8,000**	**$5,600**	**$18,200**	**$0**	**$0**	**$0**	**$0**	**$31,800**

Notes:

Costs presented are rounded to the nearest 100 dollars

CHAPTER 7
SECURITY RANKING

7.1. INTRODUCTION

7.1.1. The former CWM Burial Site has been evaluated in terms of the site-specific security risks. Chapter 5 of the CWM Scoping and Security Study Report includes a description of the ranking process. The security ranking is a component of the overall ranking process for the sites and those security-related elements of the ranking system are discussed in this chapter.

7.1.2. The primary security concern associated with these sites is the risk of the public being exposed to CWM or CWM being recovered by someone intending to use it to do harm. As described in Chapter 5 of the CWM Scoping and Security Study Report, a quantitative risk-scoring procedure was used to establish the relative security risk at the former CWM Burial Site. The scoring is based on the information collected during this project including records review, site visits, and interviews.

7.2. SECURITY SCORING

The security scoring is based on two data elements from the CWM Hazard Evaluation (CHE) module of the proposed DoD Munitions Response Site Prioritization Protocol (MRSPP). The two elements are Information on the Location of CWM and Ease of Access. The scores below are assigned based on which descriptions were selected based on site data. A copy of the MRSPP site ranking score sheet is provided in the Appendix.

7.2.1. Information on the Location of CWM

The Information on the location of CWM is classified as Evidence of No CWM based on historical evidence with a score of _0_.

7.2.2. Ease of Access

The CWM Burial Site is located in a brushy area in a rail yard in the middle of Manchester, Georgia. There are no barriers to prevent access to the burial location. The Ease of Access factor is scored as a __10__ based on no barriers to access.

7.2.3. Total Security Ranking Score

The sum of the various security factors for the former Manchester CWM Burial Site is _10_ out of a maximum possible score of 35.

CHAPTER 8
CONCLUSIONS AND FINAL RANKING

8.1. CONCLUSIONS

Review of the data for the CWM Burial Site indicates that burial of neutralized mustard was conducted; however, there is no evidence indicating that CWM remains on-site or poses a risk to human health and ecological receptors. The area where the agent was neutralized and buried was dug up three months later and tests showed no agent was left in the soil. There have been no reports of encountering any CWM or CWM related items after the burial occurred. The recommendation for the former CWM Burial Site is PCO and removal from the CWM project inventory.

8.2. SITE RANKING

8.2.1. Previous Ranking Systems (RAC Scores)

8.2.1.1. A Risk Assessment Code scoring for the CWM Burial Site was conducted in September 1993 by the St. Louis District as part of the CIR. The RAC was 5 recommending no further action for the site.

8.2.1.2. An initial ranking of the site was conducted for the CWM Study in June 2002. The suspect CWM site Original Ranking Form was used and a score of 5 out of 59 possible ranking points was assigned. Chapter 5 of the CWM Scoping and Security Study Report provides a description of the ranking system. The original ranking form is included in the Appendix.

8.2.2. Overall CWM Site Ranking

Site ranking was performed for the CWM Burial Site using the DoD MRS Prioritization Protocol CHE Module as described in Chapter 5 of the CWM Scoping and Security Study Report. Evaluations were performed based on the historical and site data collected on this site. The categories of evaluation are whether CWM is known or suspected including Configuration of CWM, Sources of CWM, Information on the Location of CWM, Ease of Access, Population Density, Population near Potential Hazards, Local Activities and Structures, and Natural and Cultural Resources. A copy of the MRSPP site ranking score sheet is provided in the Appendix. Table 8.1 shows the scores for the CWM Burial Site. A copy of the MRS Prioritization Protocol site ranking score sheet is provided in the Appendix.

8.2.2.1. CWM Configuration

Based on the documentation of the burial event and clean up, no CWM is anticipated to remain at former CWM Burial Site. The Configuration of CWM is scored as a _0_.

8.2.2.2. Sources of CWM

Based on historical evidence of the CWM burial, the Source of CWM is classified as Evidence of no CWM for a score of _0_.

8.2.2.3. Information on the Location of CWM

The Information on the location of CWM is classified as Evidence of No CWM based on historical evidence with a score of _0_.

8.2.2.4. Ease of Access

The CWM Burial Site is located in a brushy area in a rail yard in the middle of Manchester, Georgia. There are not barriers to prevent access to the burial location. The Ease of Access factor is scored as a _10_ based on no barriers to access.

8.2.2.5. Status of Property

Manchester CWM Burial Site is a FUDS. The score for the Status of Property classification is _5_ for non-DoD control.

8.2.2.6. Population Density

Based on the U.S. Census Bureau data for the 2000 census, the actual population density for the Meriwether County is between 100 and 500 persons per square mile resulting in a ranking score of _3_.

8.2.2.7. Population Near Hazard

The number of occupied structures on and within 2 miles of the property exceeds 25 giving a score of _5_.

8.2.2.8. Types of Activities/Structures

Residential and commercial activities occur on and near the CWM Burial Site giving the Types of Activities/Structures factor a score of _5_.

8.2.2.9. Ecological and Cultural Resources

Forests and streams are located at the CWM Burial Site. These qualify as ecological resources giving a score of _3_. No cultural resources have been documented for the area.

8.2.3. Overall Ranking

The sum of all of the various ranking scores for the former CWM Burial Site is _31_ out of a maximum possible score of 100, which results in a Rating of G.

Table 8.1
Site Ranking for CWM Burial Site, Manchester, GA

Category	Classification	Description	Score
CWM Configuration	Evidence of no CWM	Soil Tests after burial confirmed no agent was present in the burial area.	0
Sources of CWM	Evidence of no CWM	Soil Tests after burial confirmed no agent was present in the burial area.	0
Information on the Location of CWM	Evidence of no CWM	Soil Tests after burial confirmed no agent was present in the burial area.	0
Ease of Access	No Barrier to Access	Property is in an unfenced rail yard	10
Status of Property	Non-DoD Control	This is a FUDS.	5
Population Density	100 to 500 persons per square mile	Population density of Meriwether County	3
Population Near Hazard	greater than 25 structures	Greater than 25 inhabited structures within 2 miles	5
Types of Activities/Structures	Residential, educational and commercial	Many residences and businesses exist near the burial site.	5
Ecological and Cultural Resources	Ecological Resources Present	The forests around the site are considered to be an ecological resource	3
		Total Ranking Points	**31**
		Rating Classification	**G**

CHAPTER 9
REFERENCES

U.S. Army Corps of Engineers, St. Louis District, 1993. *Chemical Investigation Report, Manchester*, Manchester, Georgia, Site No. I04GA098000, September 1993.

U.S. Army Corps of Engineers, Savannah District, 1993. *Inventory Project Report, Manchester*, Manchester, Georgia, March1993.

U.S. Army Technical Escort Unit, 1993. List of TEU Trip Reports, February 1944 to December 1993.

APPENDIX

TECHNICAL ESCORT UNIT TRIP REPORT

TECHNICAL ESCORT UNIT
TRIP REPORTS

10 Jun 46	EWA, MD to Fort Benning, GA to Manchester, GA to HVA, AL: shipment of twenty 500 kilogram aerial bombs, H-filled (German) - leaking bomb into Atlanta no casualties, 6/27/46 - 7/46
27 Jun 46 aerial	EWA, MD to Manchester, GA: reloading of 20 500-kilogram weight bombs (German) - vapors from defective bomb inside car caused burns to two people -unloading in Atlanta on the 29th occurred near civilians and businesses - burial of leaking bomb and decontamination occurred on the car and shells, 6/27/46 -
16 Jul 46	EWA, MD to Ft. Benning, GA to Manchester, GA: while en route to Manchester car (84 1000lb H filled German aerial bombs) was unloaded to detect leaking bomb - car decontaminated - seven admitted to hospital, 6/25/46 - 7/46

PROJECT FACT SHEET

US Army Corps of Engineers®
Savannah District

Corps Facts

Vol. 1 No. 1

Date: March 2005

SUBJECT: FORMER CWM BURIAL SITE Chemical Warfare Materiel Scoping and Security Study - Project Closeout

Background

The U.S. Army Corps of Engineers is conducting the first nationwide effort to identify, manage, prioritize, and develop cost estimates for future actions at Formerly Used Defense Sites where historical documentation indicates that chemical warfare materiel had been used, produced, stored, and/or tested.

Formerly Used Defense Sites were used by the military to train Soldiers, airmen, sailors, and Marines, as well as to test new weapons and warfare capabilities. After wartime, many of these properties were no longer needed, and they were cleaned up according to the best practices available at the time and then transferred to other owners. Congress established the Formerly Used Defense Sites Program in the mid-1980s to restore properties formerly owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense. The U.S. Army Corps of Engineers is responsible for carrying out the program. The scope and magnitude of the Formerly Used Defense Sites Program is significant, with more than 9,000 properties identified for potential inclusion. Approximately 100 to 200 of these properties have been identified as suspect chemical warfare materiel sites.

The former CWM Burial Site is included as one of these properties. The former CWM Burial Site is located within a railroad track wye near the center of Manchester, Georgia. The site is currently owned by CSX Transportation Inc. (CSX) and was owned by the Atlantic Coast Line in 1946.

Site History

During rail movement of CWM to Huntsville Arsenal, Alabama, in 1946, a train car was discovered to be leaking liquid mustard (H). The car was left on the tracks in Manchester, Georgia until Chemical Warfare Service personnel could correct the situation.

One leaking mustard bomb from a shipment of eighty-four German 500-kg (nominally 1000-lb) mustard bombs was discovered by a Chemical Warfare Service detail sent from Edgewood Arsenal, Maryland. About 20 bombs had to be unloaded before the leaking bomb was discovered. The bomb case had a break in the seam running lengthwise and most of the mustard agent had splashed from the bomb and had soaked into the floor and door of the car.

The mustard agent remaining in the bomb was neutralized by mixing with 200 pounds of bleach and buried at a depth of 6 to 7 feet at the railroad yard in Manchester, Georgia. The bomb was not buried since it contained an explosive burster. The bomb casing was decontaminated and transported to Huntsville Arsenal, Alabama. The floor and outside surfaces of the contaminated car was also decontaminated. After completing the decontamination operation, men of the decontamination detail noticed the effects of vapor in the eyes and throat. The officer and six men were admitted to the Fort Benning Hospital on June 27, 1946, with vapor burns in the eyes and throat and remained there about 14 days.

On September 30, 1946, the burial site was excavated to a depth of 10 feet by a second Chemical Warfare Service detail sent from Edgewood Arsenal, Maryland. Although a weak odor of mustard was present in a small quantity of the soil removed, tests with the M-9 Detector Kit failed to detect the presence of mustard agent. Nevertheless, the potentially contaminated soil was decontaminated by mixing with 200 pounds of bleach and the hole refilled. Records stated that the area was completely free of mustard agent and no possible danger existed.

Project Description

As part of the Chemical Warfare Materiel Scoping and Security Study, the Corps of Engineers is evaluating all Formerly Used Defense Sites where chemical warfare materiel is suspected. Chemical warfare materiel has been defined by the Army as an item configured as a munition that contains a chemical substance that is intended to kill, injure, or incapacitate a person. Due to their hazards, prevalence, and military use, chemical agent identification sets are also considered chemical warfare materiel. By definition, chemical warfare materiel does not include: riot control agents; chemical herbicides (plant/weed killers); smoke and flame producing items; or soil, water, or other debris contaminated with chemical agents. The Corps is conducting this Chemical Warfare Materiel Scoping and Security Study to determine if chemical warfare materiel is present, understand the potential security, safety, and health risks, identify the requirements to clean up the sites, and prioritize future actions to be taken.

The U.S. Army Corps of Engineers (USACE) St. Louis District prepared a Chemical Investigation Report (CIR) for the CWM Burial Site in September 1993. The CIR concluded that based on historical documents, air photo interpretation, interviews with people familiar with the site, and a site inspection, there does not appear to be any chemical warfare materiel remaining at the CWM Burial Site. Detailed records for the CWM Burial Site include information on the final disposition of the bombshell and the decontamination procedures followed when burying the agent. The documents show that the former CWM Burial Site has no sources of chemical warfare materiel remaining. The

recommended action for the CWM Burial Site is CWM Project Closeout and removal from the project inventory.

For More Information

The U.S. Army Corps of Engineers wants the public to be a part of study efforts as we work hard to ensure the public's safety, the safety of our on-site workers, and to protect the environment. For more information about the Formerly Used Defense Sites Chemical Warfare Materiel Scoping and Security Study and the former CWM Burial Site, contact the U.S. Army Corps of Engineers Savannah District Public Affairs Office at 251-690-2505 or visit the Formerly Used Defense Sites Program website at:

http://hq.environmental.usace.army.mil/programs/fuds/fuds.html.

COST

Property Name: **CWM Burial Site, Manchester, Georgia**
Property Number: **I04GA0980**
Project Number: **00**
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Date: **7 March 2005**

Project Information:

An Inventory Project Report (INPR) approved the Chemical Warfare Materiel (CWM) Burial Site in Manchester, GA as a Formerly Used Defense Site (FUDS). The CWM Burial Site is located within the railroad yard owned by CSX Transportation Inc. in the city of Manchester, Georgia. The CWM Burial Site was created in June 1946 when the remaining mustard from a 1000-pound bomb leaking inside a rail car was neutralized and buried at a depth of six to seven feet. The bomb casing was decontaminated and was not buried. The burial site was excavated to a depth of ten feet in September 1946 and no mustard was detected with the M-9 Detector Kit, although a weak odor of mustard was present in a small quantity of soil removed. Th potentially contaminated soil was decontaminated with 200 pounds of bleach and the hole was refilled.

The U.S. Army Corps of Engineers (USACE) St. Louis District prepared a Chemical Investigation Report (CIR) for the CWM Burial Site in September 1993. The CIR concluded that based on historical documents, air photo interpretation, interviews with people familiar with the site, and a site inspection, there does not appear to be any CWM remaining at the CWM Burial Site. Detailed records for the CWM Burial Site include information on the final disposition of the bomb shell and the decontamination procedures followed when burying the agent. The documents show that the former CWM Burial Site has no sources of CWM. The recommended action for the CWM Burial Site is CWM Project Closeout and removal from the project inventory.

Cost Estimate Information:

The remaining work to be preformed at this property includes the following phases and will be part of the Cost To Complete (CTC) estimate to be reported in Year 1:

Project Close Out: The proposed Project Close Out (PCO) is planned to be completed within Year 1.

Changes in Reported Estimate from Fiscal Year 2004 and Fiscal Year 2005:

No future Environmental Liabilities were reported for this project in Fiscal Year 2004 due to Chemical Warfare Materials (CWM) other than costs associated with the CWM Scoping and Security Study. However, based on the information obtained during the CWM Scoping and Security Study the project was identified to have the potential of CWM. Therefore, a cost to complete estimate was developed using the information and recommendations provided within the CWM Study. The newly developed estimate is site specific and based on probable remedial actions for the project. This new estimate will be used for reporting Future Environmental Liabilities associated with this project.

Cost Estimate Team Qualifications

Cost Estimator: John Chulick

Education: B.S. (Geophysics) and M.S. (Geophysics)

Experience:
20 years experience in geophysics and project management. Managed numerous CWM Projects including four projects for USACE. Tasks performed included cost estimating, tracking of costs, implementation of project work, preparation of reports, and corresponding with the regulatory agencies.

QC Reviewer: Madhu Gunta
Education: B.S. (Civil Engineering) and M.S. (Civil and Environmental Engineering)
Experience:
10 years experience in environmental engineering. Estimated costs for numerous remediation and munition & explosives of concern [MEC] related projects. Specifically performed cost estimates for several USAESCH MEC projects.

Cost to Complete Summary
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
CWM Scoping and Security Study
7 March 2005

Phase	Phase Description	Contractor Cost	Government Cost						Task Total Cost
			Huntsville	District	TEU	ECBC	USATCES	USACHPPM	
RI/FS	**Remedial Investigation and Feasability Study**	$0	$0	$0	$0	$0	$0	$0	$0
RD	**Remedial Design***	$0	$0	$0	$0	$0	$0	$0	$0
RA-C	**Remedial Action - Construction**	$0	$0	$0	$0	$0	$0	$0	$0
LTM	**Long Term Management**	$0	$0	$0	$0	$0	$0	$0	$0
PCO	**Project Close-out**	$8,000	$5,600	$18,200	$0	$0	$0	$0	$31,800
CTC	**Total Cost To Complete**	**$8,000**	**$5,600**	**$18,200**	**$0**	**$0**	**$0**	**$0**	**$31,800**

Notes:

* Costs included in the Remedial Design (RD) phase are for the contract and design costs for future remedial action phases. The programmatic standard costs for FUDS MMRP projects as designated by the USACE HQ is $50,000.
Costs presented are rounded to the nearest 100 dollars

Schedule of Cost to Complete
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
CWM Scoping and Security Study
7 March 2005

Phase Description	Cost to Complete Distributed Over 30 Years																													Total
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	
Remedial Investigation and Feasability Study	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Remedial Design*	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Remedial Action - Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Long Term Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Project Close-out	$31,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$31,800
Total Cost By Year	$31,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$31,800

Notes:
* Costs included in the Remedial Design (RD) phase are for the contract and design costs for future remedial action phases. The programmatic standard costs for FUDS MMRP projects as designated by the USACE HQ is $50,000.
Costs presented are rounded to the nearest 100 dollars

Cost Summary
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

Task	Task Description	Units	Unit of Measure	Contractor Cost	Government Cost				
					Huntsville	District	TEU	ECBC	USATCES
1.0	**Public Meeting**								
1.1	Public Notification	**0**	**EA**	$0	$0	$0	$0	$0	$0
1.2	Meeting Preparation/Logistics	**0**	**EA**	$0	$0	$0	$0	$0	$0
1.3	Meeting	**0**	**EA**	$0	$0	$0	$0	$0	$0
1.4	Follow Up Documentation	**0**	**EA**	$0	$0	$0	$0	$0	$0
2.0	**PCO Material**	**1**	**EA**	$4,300	$4,000	$6,000	$0	$0	$0
3.0	**Public Notice**	**1**	**EA**	$3,700	$1,600	$7,400	$0	$0	$0
4.0	**Regulatory Correspondence and Meetings**	**1**	**EA**	$0	$0	$4,800	$0	$0	$0
Summary of All Tasks				**$8,000**	**$5,600**	**$18,200**	**$0**	**$0**	**$0**

Notes:

Costs presented are rounded to the nearest 100 dollars

Cost Summary
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

Task	Task Description	Contractor Cost	Government Cost					
			Huntsville	District	TEU	ECBC	USATCES	USACHPP!
1.0	**Public Meeting**							
1.1	Public Notification	$4,963	$2,600	$1,360	$0	$0	$0	$0
1.2	Meeting Preparation/Logistics	$11,508	$2,400	$4,080	$0	$0	$0	$0
1.3	Meeting	$7,542	$7,054	$6,334	$0	$0	$0	$0
1.4	Follow Up Documentation	$3,027	$800	$680	$0	$0	$0	$0
2.0	**PCO Material**	$4,272	$4,000	$5,960	$0	$0	$0	$0
3.0	**Public Notice**	$3,611	$1,600	$7,320	$0	$0	$0	$0
4.0	**Regulatory Correspondence and Meetings**	$0	$0	$4,786	$0	$0	$0	$0

Task 2.0 - PCO Material
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

Responsibility and Assumptions:

Prime Contractor - Prepare letter and compile report (draft/final) deliverable: hard copy letter and report, electronic supporting documentation; Assume 10 copies of draft/final report.

Huntsville/District - Submit letters, Coordinate with reviewing agencies, Review and Comment

CONTRACTOR COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Senior Project Manager - AQ	$ 99.03	/hour	4	$396	Coordination and review (0.5 day)
Engineer, Senior - CX	$ 94.59	/hour	8	$757	Preparation and review of the report (1 day)
Scientist, Staff - AE	$ 64.99	/hour	24	$1,560	Preparation of the report (3 days)
GIS Manager - AT	$ 82.72	/hour	4	$331	GIS support for preparation of the report (0.5 day)
Administrative Support - EV	$ 44.70	/hour	16	$715	Administrative activities (2 days)
	Subtotal Hours/Labor Cost		56	$3,759	
OTHER DIRECT COSTS					
IN-HOUSE SERVICES					
Telephone	$4.00	/call	25	$100	Telephone calls for PCO Material
Facsimile	$0.50	/page	25	$13	Faxes neede for PCO Material
FED Exp Letter/2 lb pack	$15.00	/each	6	$90	Transmittal of the PCO Material
	Subtotal In-House Services Cost			$203	
REPRODUCTION					
CDs for Project Document Submittal	2	/each	20	$40	CDs for the PCO Material
	Subtotal Reproduction Cost			$40	
	SUBTOTAL ODCs COSTs			$243	
	SUBTOTAL LABOR COST			$3,759	
	Project Management Costs			$270	7% of Labor Costs, 3% Other Direct Costs
	TASK 2.0 CONTRACTOR TOTAL COST			**$4,272**	

Task 2.0 - PCO Material
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

GOVERNMENT COST
HUNTSVILLE COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Project Manager GS-13-1	$ 100.00	/hour	16	$1,600	Coordination; Review and comment (2 days)
Technical Manager GS-13-1	$ 100.00	/hour	24	$2,400	Review and comment (3 days)
	Subtotal Hours/Labor Cost		40	$4,000	
OTHER DIRECT COSTS					
			SUBTOTAL ODCs COSTs	$0	
			SUBTOTAL LABOR COST	$4,000	
			TASK 2.0 HUNTSVILLE TOTAL COST	**$4,000**	

DISTRICT COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Project Manager GS-12-1	$ 85.00	/hour	24	$2,040	Review and comment (3 days)
PAO Officer GS-12-1	$ 85.00	/hour	32	$2,720	Review and comment (4 days)
Administrative Support GS-9-1	$ 50.00	/hour	24	$1,200	Administrative activities (3 days)
	Subtotal Hours/Labor Cost		80	$5,960	
OTHER DIRECT COSTS					
			SUBTOTAL ODCs COSTs	$0	
			SUBTOTAL LABOR COST	$5,960	
			TASK 2.0 DISTRICT TOTAL COST	**$5,960**	

Task 3.0 - Public Notice
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

Responsibility and Assumptions:

Prime Contractor - Prepare notice (electronic draft for review, publish final); Coordinate publication; Setup information repository; Coordinate with the District.

Huntsville - Review and Comment

District - Receive/track all comments; Respond to all public inquiries/info. Requests; Official response to comments; Maintain Info. Repository until decision document is final.

CONTRACTOR COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Senior Project Manager - AQ	$ 99.03	/hour	4	$396	Coordination, review, and support (0.5 day)
Scientist, Staff - AE	$ 64.99	/hour	24	$1,560	Preparation of the notice (3 days)
Administrative Support - EV	$ 44.70	/hour	16	$715	Administrative support (2 days)
Accounting/ Procurement - EW	$ 77.88	/hour	4	$312	Procurement (0.5 day)
	Subtotal Hours/Labor Cost		48	$2,983	
OTHER DIRECT COSTS					
IN-HOUSE SERVICES					
Telephone	$4.00	/call	25	$100	Telephone calls for the public notice
Facsimile	$0.50	/page	25	$13	Faxes needed for the public notice
FED Exp Package (50 lbs)	$75.00	/each	1	$75	Delivery of the public notice package
	Subtotal In-House Services Cost			$188	
REPRODUCTION					
CDs for Project Document Submittal	$2.00	/each	10	$20	CDs for the public notice
3-ring Binders	$12.50	/each	10	$125	Binders for the public notice
Color Copies	$1.50	/page	50	$75	Color copies for the public notice
	Subtotal Reproduction Cost			$220	
OTHER					
Paid Advertisement in Newspaper	$1,000.00	/ad	1	$1,000	Advertisement in the newspaper
	Subtotal Other Cost			$1,000	
	SUBTOTAL ODCs COSTs			$408	
	SUBTOTAL LABOR COST			$2,983	
	Project Management Costs			$221	7% of Labor Costs, 3% Other Direct Costs
	TASK 3.0 CONTRACTOR TOTAL COST			**$3,611**	

Task 3.0 - Public Notice
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

GOVERNMENT COST
HUNTSVILLE COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Project Manager GS-13-1	$ 100.00	/hour	8	$800	Coordination; Review and comment (1 day)
Technical Manager GS-13-1	$ 100.00	/hour	8	$800	Review and comment (1 day)
	Subtotal Hours/Labor Cost		16	$1,600	
OTHER DIRECT COSTS					
			SUBTOTAL ODCs COSTs	$0	
			SUBTOTAL LABOR COST	$1,600	
			TASK 3.0 HUNTSVILLE TOTAL COST	**$1,600**	

DISTRICT COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Project Manager GS-12-1	$ 85.00	/hour	32	$2,720	Official response to comments; Maintain Info. Repository; (4 days)
PAO Officer GS-12-1	$ 85.00	/hour	40	$3,400	Receive/track all comments; Respond to all public inquiries/info. Requests; (5 days)
Administrative Support GS-9-1	$ 50.00	/hour	24	$1,200	Administrative activities (3 days)
	Subtotal Hours/Labor Cost		96	$7,320	
OTHER DIRECT COSTS					
			SUBTOTAL ODCs COSTs	$0	
			SUBTOTAL LABOR COST	$7,320	
			TASK 3.0 DISTRICT TOTAL COST	**$7,320**	

Task 4.0 - Regulatory Correspondence and Meetings
Property Name: CWM Burial Site, Manchester, Georgia, Property Number: I04GA0980, Project Number: 00
Project Close-out
CWM Scoping and Security Study
7 March 2005

Responsibility and Assumptions:

District - Annual base level effort for communications with regulators; assume one meeting per year.

CONTRACTOR COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
	Subtotal Hours/Labor Cost		0	$0	
OTHER DIRECT COSTS					
			SUBTOTAL ODCs COSTs	$0	
			SUBTOTAL LABOR COST	$0	
			Project Management Costs	$0	7% of Labor Costs, 3% Other Direct Costs
			TASK 4.0 CONTRACTOR TOTAL COST	**$0**	

GOVERNMENT COST
HUNTSVILLE COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
	Subtotal Hours/Labor Cost		0	$0	
OTHER DIRECT COSTS					
			SUBTOTAL ODCs COSTs	$0	
			SUBTOTAL LABOR COST	$0	
			TASK 4.0 HUNTSVILLE TOTAL COST	**$0**	

DISTRICT COST

Classification	Unit Cost	Units	Quantity	Cost	Assumptions
LABOR COST					
Project Manager GS-12-1	$ 85.00	/hour	40	$3,400	Communications; one-day meeting with regulator (5 days)
Administrative Support GS-9-1	$ 50.00	/hour	24	$1,200	Administrative support (3 days)
	Subtotal Hours/Labor Cost		64	$4,600	
OTHER DIRECT COSTS					
TRAVEL					
Perdiem (Other, GA)	$91.00	/day	1	$91	Per diem for one day
Auto Rental	$70.00	/day	1	$70	One Auto Rental for 1 day
Gasoline	$50.00	/week	0.5	$25	Gasoline for rented vehicle
		Subtotal Travel Cost		$186	
		SUBTOTAL ODCs COSTs		$186	
		SUBTOTAL LABOR COST		$4,600	
		TASK 4.0 DISTRICT TOTAL COST		**$4,786**	

Contractor
Labor Classifications and Unit Cost
CWM Scoping and Security Study
7 March 2005

Classification	Unit Cost	Units
Senior Project Manager - AQ	$ 99.03	/hour
Technical Director - AD	$ 103.46	/hour
Engineer, Senior - CX	$ 94.59	/hour
Engineer, Staff - CZ	$ 73.75	/hour
Senior Geophysicist - AD	$ 103.46	/hour
Site Geophysicist - DB	$ 73.19	/hour
Geologist - AO	$ 70.35	/hour
Scientist, Senior - AD	$ 103.46	/hour
Scientist, Staff - AE	$ 64.99	/hour
GIS Manager - AT	$ 82.72	/hour
GIS Analyst - AP	$ 54.59	/hour
QC Manager - ER	$ 83.19	/hour
Computer Programer - AK	$ 71.29	/hour
Administrative Support - EV	$ 44.70	/hour
Accounting/ Procurement - EW	$ 77.88	/hour
Site Project Manager - DC	$ 78.48	/hour
SUXOS - AZ	$ 66.87	/hour
Engineer, Junior - DA	$ 54.12	/hour
UXO Safety - CP	$ 61.33	/hour
UXO Safety (4% HPD) - CQ	$ 63.76	/hour
UXO Safety (8% HPD) - CR	$ 66.19	/hour
UXO QCS - CI	$ 61.40	/hour
UXO QCS (4% HPD) - CJ	$ 63.85	/hour
UXO QCS (8% HPD) - CK	$ 66.31	/hour
UXO Techician II - BP	$ 46.20	/hour
UXO Techician II (4% HPD) - BQ	$ 47.99	/hour
UXO Techician II (8% HPD) - BR	$ 49.78	/hour
UXO Techician III - BW	$ 55.19	/hour
UXO Techician III (4% HPD) - BX	$ 57.34	/hour
UXO Techician III (8% HPD) - BY	$ 59.49	/hour

Huntsville, District, TEU, ECBC, USATCES, and USACHPM
Labor Classifications and Unit Cost
CWM Scoping and Security Study
7 March 2005

Classification	Unit Cost	Units
Project Manager GS-13-1	$ 100.00	/hour
Technical Manager GS-13-1	$ 100.00	/hour
Project Manager GS-12-1	$ 85.00	/hour
Technical Manager GS-12-1	$ 85.00	/hour
Technical Manager GS-11-1	$ 70.00	/hour
TEU Site Supervisor (WG)	$ 100.00	/hour
TEU Haz Mat Personnel	$ 85.00	/hour
TEU Haz Mat Personnel 4% HPD	$ 89.00	/hour
TEU Haz Mat Personnel 8% HPD	$ 92.00	/hour
TEU EOD	$ -	/hour
TEU Administrative Support GS-9-1	$ 50.00	/hour
ECBC Site Supervisor GS-13-1	$ 100.00	/hour
ECBC Site Personnel GS-12-1	$ 85.00	/hour
USATCES* Support Personnel GS-13-1	$ 100.00	/hour
USACHPM Support Personnel GS-13-1	$ 100.00	/hour
PAO Officer GS-12-1	$ 85.00	/hour
UXO Site Safety Support GS-12-1	$ 85.00	/hour
UXO Site Safety Support 4% HPD GS-12-1	$ 89.00	/hour
UXO Site Safety Support 8% HPD GS-12-1	$ 92.00	/hour
Contracting Officer GS-13-1	$ 100.00	/hour
Contracting Specialist GS-12-1	$ 85.00	/hour
Administrative Support GS-9-1	$ 50.00	/hour
Resource Management Officer GS-12-1	$ 85.00	/hour
Real Estate Specialist GS-12-1	$ 85.00	/hour

ODC Classifications and Unit Cost
Huntsville, District, TEU, ECBC, USATCES, and USACHPM
CWM Scoping and Security Study
7 March 2005

Item	Unit Price	Units
MATERIALS AND SUPPLIES		
Field Notebook	$14.00	/each
Engineers Tape 100'	$25.00	/each
Film & Developing	$20.00	/roll
Video reproduction	$60.00	/video
Duct Tape (dozen)	$72.00	/case
Survey Stake/Flag	$20.00	/bundle
Job Supplies	$125.00	/week
Job Supplies	$25.00	/day
Miscellaneous	$25.00	/day
EQUIPMENT		
Digital Camera	$300.00	/each
Video camera (1 Nos.)	$700.00	/each
Computer, portable (4 Nos.)	$8,000.00	/each
Computer, Desktop (1 Nos.)	$1,500.00	/each
Computer, Desktop (1 Nos.)	$150.00	/week
Computer Network Setup	$1,000.00	/each
Printer/Copier/Fax (1 Nos.)	$500.00	/each
PDA's	$200.00	/each
Field Radios (15 Nos.) Rental	$200.00	/week
Schonstedt Rental	$30.00	/week
Explosive Magazine Rental	$400.00	/month
Geophysical Survey Instruments Rental	$700.00	/week
Arc-Second Vulcan System	$7,500.00	/month
Trimble Robotic Laser	$2,400.00	/month
Trimble RTK GPS	$1,200.00	/week
Field Office Rental	$500.00	/week
Surviellance Camera	$500.00	/week
Backhoe/Forklift	$450.00	/week
Bobcat	$400.00	/week
Generator	$300.00	/week
Photo-Ionization Detector	$50.00	/week
Heat Stress Monitor	$40.00	/week
Dust Meter	$50.00	/week
Portacount Meter	$360.00	/week
Sanitation	$50.00	/week
Towed Array System (ATV/Computer)	$250.00	/week
Air Conditioning Unit	$1,300.00	/week
PPE for Field Teams	$50.00	/week
Interspiro S4, 60 min bottle, 915 regulator	$100.00	/week
North 7600 respirator	$200.00	/each
Air Purifying Cartridges	$20.00	/pair
TEU Equipment Supplies	$4,000.00	/week
HEALTH & SAFETY EQUIPMENT		
Drinking Water/Ice	$75.00	/week
Field Safety Kits	$150.00	/week
TRAVEL		
* Airfare	$700.00	/each
Perdiem **(Other, GA)**	$91.00	/day
Parking	$8.00	/day
Auto Rental	$70.00	/day
Auto Rental	$300.00	/week
SUV Vehicle Rental	$400.00	/week
Gasoline	$50.00	/week
IN-HOUSE SERVICES		
Telephone	$4.00	/call
Web Host Fee	$40.00	/month
GIS Workstation	$30.00	/hour
CADD/Graphics	$10.00	/hour
Facsimile	$0.50	/page
Work Station Plotter	$5.00	/plot
FED Exp Letter/2 lb pack	$15.00	/each
FED Exp Package (50 lbs)	$75.00	/each
Mail 4-lb pack	$5.00	/pack
Mail Letters	$0.50	/letter
Shipping/Multiple Geo Instr. Boxes. One-way	$400.00	/each
Web Site Development	$10,000.00	/each

ODC Classifications and Unit Cost
Huntsville, District, TEU, ECBC, USATCES, and USACHPM
CWM Scoping and Security Study
7 March 2005

Item	Unit Price	Units
REPRODUCTION		
Photocopier	$0.00	/page
Aerial Photo Repro	$20.00	/photo
Blueline Repro	$3.00	/sheet
CDs for Project Document Submittal	$2.00	/each
3-ring Binders	$12.50	/each
Color Copies	$1.50	/page
Color Copies-Large Maps	$15.00	/page
Laminate Displays	$50.00	/page
SUBCONTRACTORS		
Explosives		/each
Brush Cut Subcontractor	$1,600.00	/acre
Brush Cut Subcontractor	$10,000.00	/each
Land Survey Subcontractor		/acre
Scrap Disposal Sub - FACT		/each
Installation of IC Signage		/each
Backhoe and Operator		/day
Access Road Subcontractor	$10,000.00	/each
Positional Equipment Subcontractor		/day
Print/Mail Subcontractor	$1,000.00	/each
Ambulance Service	$4,000.00	/week
Crane	$1,000.00	/each
Electrician	$1,500.00	/each
Lightning Suppression System	$2,500.00	/each
Security Guards	$4,000.00	/week
Fence contractor	$8,000.00	/each
Hospital Training	$40,000.00	/each
HTW Laboratory	$900.00	/sample
SAIC Hospital Training	$8,000.00	/each
OTHER		
Paid Advertisement in Newspaper	$1,000.00	/ad
Room Rental	$250.00	/event
ECBC Operation and Maintenance		/each
ECBC Project Management Cost		/each
GOVERNMENT PROCURED EQUIPMENT		
MINICAMS		/each
DAAMS Pumps		/acre
Mobile Analytical Platform		/each
Analytical Laboratory	$900.00	/sample
CWM Analyses	$2,000.00	/sample

* - Average airfare from Huntsville to LosAngeles, Denver, Seattle, Washington D.C., and Orlando.
Based on round-trip ticket with full restrictions and 1-week advance notice.

MRS PRIORITIZATION PROTOCOL

Table 11
Classifications within the CHE CWM Configuration Data Element

Classification	Description	Score
CWM, explosive configuration, either UXO or damaged DMM	The CWM known or suspected of being present at the MRS is: - Explosively configured CWM that are UXO (i.e., CWM/UXO) - Explosively configured CWM that are DMM that have been damaged (CWM/DMM)	**0**
	- The CWM known or suspected of being present at the MRS are CWM/DMM that are co-mingled with conventional munitions that are UXO.	**0**
CWM, explosive configuration that are DMM (unused)	- The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	**0**
CWM, not-explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS is: - Non-explosively configured CWM/DMM - Bulk CWM/DMM (e.g., ton container).	**0**
CAIS K941 and CAIS K942	- The CWM/DMM known or suspected of being present at the MRS is K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	**0**
CAIS (chemical agent identification sets)	- The CWM known or suspected of being present at the MRS are only CAIS/DMM. The CAIS present cannot include CAIS K941, toxic gas set M-1; and K942, toxic gas set M-2/E11 for the MRS to be assinged this rating.	**0**
Evidence of no CWM	- Following investigation, the physical evidence indicated that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	**0**

Notes:

- The notation CWM/DMM means CWM that are DMM.
- The term CWM/UXO means CWM that are UXO.
- Historical evidence means that the investigation; (1) found written documentation or records, or (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information.
- Physical evidence means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or components, fragements, or other peices of military munitions, or (2) the results of field or laboratory sampling and analysis procedures, or (3) the results of geophysical investigations.

Table 12
Classifications within the CHE Sources of CWM Data Element

Classification	Description	Score
Live-fire involving CWM:	- The MRS is a range that supported live-fire of explosively configured CWM and the CWM/UXO are known or suspected of being present on the surface or in the subsurface. - The MRS is a range that supported live-fire with conventional munitions, and CWM/DMM are on the surface or in the subsurface co-mingled with conventional munitions that are UXO.	**0**
Damanged CWM/DMM or CAIS/DMM, surface or subsurface:	- There are damanged CWM/DMM on the surface or in the subsurface at the MRS.	**0**
Undamaged DWM/DMM or CAIS/DMM, surface:	- There are undamaged CWM/DMM on the surface at the MRS.	**0**
Undamaged CWM/DMM, or CAIS/DMM,	- There are undamaged CWM/DMM in the subsurface at the MRS.	**0**
Production facilities of CWM or CAIS:	- The MRS is a facility that engaged in production of CWM, and there are CWM/DMM suspected of being present on the surface or in the subsurface.	**0**
RDTE facility using CWM or CAIS:	- The MRS is at a facility that was involved in non-live fire Research, Development, Testing, and Evaluation (RDTE) activities (including static testing) involving CWM, and there are CWM/DMM suspected of being present on the surface or in the subsurface.	**0**
Training Facility using CWM or CAIS:	- The MRS is a location that was involved in training activities involving CWM and/or CAIS (e.g., training in recognition of CWA, decontamination training) and CWM/DMM are suspected of being present on the surface or in the subsurface.	**0**
Storage or transfer points of CWM:	- The MRS is a former storage facility or transfer point (e.g., inter-modal transfer) for CWM.	**0**
Evidence of no CWM:	- Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	**0**

Notes:

- The notation CWM/DMM means CWM that are DMM.
- The term CWM/UXO means that CWM that are UXO.
- Historical evidence means that the investigation; (1) found written documentation or records, or (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information.
- Physical evidence means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or components, fragements, or other peices of military munitions, or (2) the results of field or laboratory sampling and analysis procedures, or (3) the results of geophysical investigations.
- In the subsurface means the CWM (i.e., a DMM or UXO) is: (1) entirely beneath the ground surface, or (2) fully submerged in a water body.
- On the surface means the CWM (i.e., a DMM or UXO) is: (1) entirely or partially exposed above the ground surface, or (2) entirely or partially exposed above the surface of a water body (e.g., as a result of tidal activity).

Table 13
Classifications within the CHE Information on the Location of CWM Data Element

Classification	Description	Score
Confirmed surface:	- Physical evidence indicates there are CWM on the surface of the MRS. - Historical evidence (e.g., a confirmed incident report or accident report) indicates there are CWM on the surface of the MRS.	**0**
Confirmed subsurface, active:	- Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed in the future by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or there are on-going intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM. - Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed in the future by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or there are on-going intrustive activities (e.g., plowing, construction, dredging) at the MRS that are likely to expose CWM.	**0**
Confirmed subsurface, stable:	- Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed in the future by naturally occurring phenomena, or there are on-going intrusive activities at the MRS that are likely to cause CWM to be exposed. - Historical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed in the future by naturally occurring phenomena, or there are on-going intrusive activities at the MRS that are likely to either occur, or if the activities do occur, are likely to cause CWM to be exposed.	**0**
Suspected (physical evidence):	- There is physical evidence other than the documented presence of CWM, indicating that CWM may be present at the MRS.	**0**
Suspected (historical	- There is historical evidence indicating that CWM may be present at the MRS.	**0**
Subsurface, physical	- There is physical or historical evidence indicating the CWM may be present in the subsurface, but there is a physical contraint (e.g., pavement, water depth over 120 feet) preventing direct access to the CWM.	**0**
Evidence of no CWM:	- Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	**0**

Notes:

- Historical evidence means that the investigation; (1) found written documentation or records, or (2) documented interviews of persons with knowledge of site conditions, or (3) found and verified other forms of information.
- Physical evidence means: (1) recorded observations from on-site investigations, such as finding intact UXO or DMM, or components, fragements, or other peices of military munitions, or (2) the results of field or laboratory sampling and analysis procedures, or (3) the results of geophysical investigations.
- In the subsurface means the CWM (i.e., a DMM or UXO) is: (1) entirely beneath the ground surface, or (2) fully submerged in a water body.
- On the surface means the CWM (i.e., a DMM or UXO) is: (1) entirely or partially exposed above the ground surface, or (2) entirely or partially exposed above the surface of a water body (e.g., as a result of tidal activity).
- The term small arms ammunition means solid projectile ammunition that is .50 caliber or smaller and shotgun shells.

Table 14
Classifications within the CHE Ease of Access Data Element

Classification	Description	Score
No barrier:	- There is no barrier preventing access to all parts of the MRS (i.e., all parts of the MRS are accessible).	**10**
Barrier to MRS access is incomplete:	- There is a barrier preventing access to parts of the MRS but not the entire MRS.	**0**
Barrier to MRS access is complete, but not monitored:	- There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effetively preventing access to all parts of the MRS.	**0**
Barrier to MRS access is complete and monitored:	- There is a barrier preventing access to all parts of the MRS, and there is active continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	**0**

Notes:
- Barrier means a natural obstacle or obstacles (e.g., difficult terrain, dense vegetation, deep or fast moving water), a man-made obstacle or obstacles (e.g., fencing), or a combination of natural and man-made obstacles.

Table 15
Classifications within the CHE Status of Property Data Element

Classification	Description	Score
Non-DoD control:	- The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by the DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by American Indian or Alaskan Native Tribes, or State or local governments; and lands or water bodies managed by other Federal agencies.	**5**
Scheduled for transfer from DoD control:	- The MRS is on land or is a water body that is owned by, leased to, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to control of another entity (e.g., State, American Indian, Alaskan Native, or local government; a private party; another Federal agency) within 3 years from the date the Protocol is appllied.	**0**
DoD control:	- The MRS is on land or is a water body that is owned by, leased to, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD controls access to the property 24-hours per day, every day of the calendar year.	**0**

Table 16
Classifications within the CHE Population Density Data Element

Classification	Description	Score
>500 persons per square mile:	-There are more than 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	**0**
100-500 persons per square mile:	-There are 100 to 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	**3**
<100 persons per square mile:	-There are fewer than 100 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	**0**

Notes:
-If an MRS is in more than one county, the DoD Component will use the larges population value among the counties. If the MRS is within or borders a city or town, the population density for the city or town instead of the county population density is used.

Table 17
Classifications within the CHE Population Near Hazard Data Element

Classification	Description	Score
26 or more structures:	-There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or	**5**
16 to 25:	-There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	**0**
11 to 15:	-There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	**0**
6 to 10:	-There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	**0**
1 to 5:	-There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	**0**
0:	-There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	**0**

Notes:
- The term inhabited structures means permanent or temporary structures, other than DoD munitions-related structures, that are routinely occupied by one or more persons for any portion of a day.

Table 18
Classifications within the CHE Types of Activities/Structures Data Element

Classification	Description	Score
Residential, educational, commercial, or subsistence:	-Activities are conducted or inhabited structures are located up to 2 miles from the MRS's boundary that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, play grounds, community gathering areas, religious sites or sites used by subsistence hunting, fishing, and gathering.	**5**
Parks and recreational areas:	- Activities are conducted or inhabited structures are located up to 2 miles from the MRS's boundary or within the MRS's boundary that are associated with parks, nature preserves or other recreational uses.	**0**
Agricultural, forestry:	- Activities are conducted or inhabited structures are located up to 2 miles from the MRS's boundary or within the MRS's boundary that are associated with agriculture or forestry.	**0**
Industrial or warehousing:	- Activities are conducted or inhabited structures are located up to 2 miles from the MRS's boundary or within the MRS's boundary that are associated with industrial activities or warehousing.	**0**
No known or recurring activities:	- There are no known recurring activities occuring up to 2 miles from the MRS's boundary or within the MRS's boundary.	**0**

Notes:
- The term inhabited structures means permanent or temporary structures, other than DoD munitions-related structures, that are routinely occupied by one or more persons for any portion of a day.

Table 19
Classifications within the CHE Ecological and/or Cultural Resources Data Element

Classification	Description	Score
Ecological and cultural resources present:	- There are both ecological and cultural resources present on the MRS.	**0**
Ecological resources present:	- There are ecological resources present on the MRS.	**3**
Cultural resources present:	- There are cultural resources present on the MRS.	**0**
No ecological or cultural resources present:	- There are no ecological or cultural resources present on the MRS.	**0**

Notes:
- Ecological resources means that: (1) a threatened or endangered species (designated under the Endangered Species Act (ESA)) is present on the MRS; or (2) the MRS is designated under the ESA as a critical habitat for a threatened or endangered species; or (3) there are identified sensitive ecosystems such as wetlands or breeding grounds present on the MRS.
- Cultural resources means there are recognized cultural, spiritual, traditional, religious, or historical features (e.g., structures, artifacts, symbolism) on the MRS. For example, American Indians or Alaska Natives deem the MRS to be of spiritual significance or there are areas that are used by American Indians or Alaska Natives for subsistence activities (e.g., hunting, fishing). Requirements for determining if a particular feature is a cultural resource are found in the National Historic Preservation Act, Native American Graves Protection and Repatriation Act, Archeological Resources Protection Act, Executive Order 13007, and the American Indian Religious Freedom Act.

Table 20 Classifications within the CHE Rating from the CHE Module Score	
Overall CHE Module Score	**CHE Rating**
The MRS has an overall CHE module score from 92 to 100:	
The MRS has an overall CHE module score from 82 to 91:	
The MRS has an overall CHE module score from 71 to 81:	
The MRS has an overall CHE module score from 60 to 70:	
The MRS has an overall CHE module score from 48 to 59:	
The MRS has an overall CHE module score from 38 to 47:	
The MRS has an overall CHE module score less than 38:	**CHE Rating G**

ORIGINAL RANKING FORM

Original Ranking Form ***Ranking of CWM FUDS***

The purpose of this procedure is to determine if current RAC scores are accurate and to rank each site within each RAC designation. If new information is found on a site the evaluators shall determine if it changes the current RAC. The TAG team process shall be used to assess if a RAC has changed.

Site Name: CWM Burial Site, Manchester a. Location: Manchester, GA, Meriwether County b. Project Number: I04GA0980 c. Contract/Task Order Number: d. Type of Action: ASR Review *e.* Current RAC (Score): *5*	*Division: SAD* POC: Sharon Taylor Phone: 404-562-5212 *District: SAS* POC: David Roulo Phone: 912-652-5945

Site Description: Burial site is located within a railroad wye of the former Alantic Coast Line now owned by CSX Transportation Inc. (CSX) in the city of Manchester, in Meriwether County, Georgia.

Site History: The remains of the Mustard (H) from one leaking 1000 pound German aerial bomb which was neutralized with slurry, on 26 June 1946 and re-dug and the dirt decontaminated with 200 pounds of bleach on 30 September 1946 The bomb was not buried since it contained an explosive charge as burster. The bomb casing was decontaminated with DANC and slurry and transported to Huntsville Arsenal, Alabama.

Previous Actions: ASR, site investigation

Objectives: The overall objective of this project is to rank each CWM FUDS within each RAC designation. All CWM FUDS sites currently on the FUDS database shall be ranked in this process.

Current Status: Still owned by original company. No development expected.

Issues and Concerns:None

Continuation Section:

Original Ranking Form ***Ranking of CWM FUDS***

Site Name: CWM Burial Site, Manchester | Project Number : I04GA09800 | Date: 2 June 2002

Name of person completing this form:Dave Becker | Title & Organization: Safety Specialist/CEHNC-OE-S

Name of person concurring with this form: Kim Meacham | Title & Organization: Tech Manager/CEHNC-ED-CS-P

Site QC: Hank Hubbard | Date: 03 June 2002

Current RAC: 5 **Phase *(Check one)*: ASR/INPR Review ☒ Site Visit ☐ New Data Review ☐ Expanded Site Visit ☐**

1a. Have the available historical records for this site been reviewed?

Yes ☒ No ☐

If the answer to 1a is yes, record all reference material and document dates in section 7 and proceed to 1b.
If the answer to 1a is no, review the site information prior to completing this form.

1b. Is there any "post ASR" information (site visit, newspaper article, worker interview, etc.) that indicates a potential CWM hazard?

Yes ☐ No ☒

If yes, indicate the source and the date in section 7 and proceed to 2.

2. According to the records review, is this site known or suspected to have been used for:

(check all applicable) ***(Check all applicable)***

	Points		Points
2a. Individual Soldier Training	2☐	2c. Surface CWM contamination *expected*	25
Live fire of any ordnance with agent filler	5☐	Indicate the type of CWM	
Liquid Agent Training	2☐	***Subtotal for 2c***	**0**
Storage of CWM	2☐	2d. Subsurface CWM contamination *expected*	
Disposal or Demilitarization of CWM	5☒	Explosively configured & fired CWM	10☐
Decontamination Training	2☐	Explosively configured (not fired) CWM	5☐
Transfer Operations	2☐	CWM mixed with conventional OE	5☐
Production Facility	3☐	Containers of agent	3☐
Research Facility	2☐	Non-explosively configured CWM	3☐
Static Testing	2☐	Chemical Agent Identification Sets (CAIS)	2☐
Agent Training with other than 385-61 agent	0☐	Agent-contaminated media	0☒
Subtotal for 2a (select the highest value only)	**5**	***Subtotal for 2d. (select the highest value only)***	***0***

2b. Is there any record of a TEU response action that confirmed CWM after closure?
If yes, add 4 points to Subtotal 2a.

Subtotal for 2a & 2b **5**

If the total points in 2a, 2b, 2c & 2d are greater than 0, a site visit may be warranted. If the point total for 2a, 2b, 2c & 2d are all 0, then the site may warrant an NDAI/NOFA. Proceed to Section 6.

3. Additional Documentation.	4. Current Land Use.
3a. Indicate the reliability of the data that the information in Section 2 was based on. Official documentation (DoD, local law enforcement etc.) Complete documentation ☒ Incomplete documentation ☐ Interview confirmed by documentation (finding or documents) ☐ Interview not confirmed ☐ 3b. Indicate if there is any record of a Site Clean up or intrusive activity after site closure. Official Report of Clean-up ☐ HTW or construction intrusive activities conducted ☐ *(If the information in this section impacts the ranking score comment & adjust in 5)*	Is there any current information on the current land use and site dynamics? If no, a site visit may be warranted. Else, answer the following questions on the site use. Points 4a. Current Land Use ***(Check worst case)*** Grazing 5☐ Recreational Area 10☐ All of the land is capped (water, soil, pavement etc.) 0☐ Restricted area – no unauthorized access 0☒ All of the land have been developed 0☐ Land is remote (occasional visitor) 2☐ Remote area with developed recreational site 5☐ Development is planned within 10 years 5☐ Development is planned within 5 years 10☐ Development is planned within 2 years 15☐ Land undeveloped near population 5☐ Agricultural Field 10☐ ***Subtotal for 4 (Current land use)*** **0**
5. Summary ***(Complete the summary below to determine the rank score)***	If the total points in 4 are 0, then the site will probably warrant a NDAI/NOFA or institutional controls. Proceed to Section 6. If the current site information is greater than 2 years old a site visit may be warranted**.**
5a. Total Points from Site History & Contaminant Section Points from 2a & 2b 5 Points from 2c 0 Points from 2d 0 5b. Total Points from Current Land Use Points from 4 0 5c. ***Current RAC*** **5** ***Total Ranking Points*** **5**	***6. Recommendations*** ***(Recommend next phase for this site)*** ☐ Supplemental ASR* ☐ Supplemental Historical Picture Interpretation* ☐ Re-RAC ☐ Site Visit ☐ Institutional Controls ☒ NOFA (RCRA) or NDAI (CERCLA) ☐ Expanded Site Investigation ☐ Removal * Is there evidence that supplemental information may be found with a expanded ASR or historical photo analysis? Yes ☐ No ☒

Current RAC Score 5	Current RAC Score 5	Ranking Points 5
Review Concur ☒ Non-Concur ☐	Reviewer 2 Concur ☐ Non-Concur ☒	Non-Concur ☐ Concur ☒

Comments: (Include all reference material reviewed and the dates of the reference material in this area.)
. Only contaminated soil which was treated. Bomb bodies deconned and shipped to Redstone Arsenal, Huntsville, AL.
Quote from report with which I agree "The remaining residue (if any) of the 1946 destruction and neutralization of remaining residue, no longer presents an OEW/CWM hazard. The chemicals used in the neutralization process, such as Acetylene Tetrachloride may still be present. Remnants of these chemicals should be treated as Hazardous and Toxic Waste (HTW). Intrusion potential is low due to the site being located within a railroad wye. No change of use (railroad) or ownership (CSX Transportation Inc.) is likely to occur in the future. Based on the absence of an OEW/CWM threat on this DERP/FUDS location, a Risk Assessment Code (RAC) of 5 has been assigned"

Ken's list shows in comment NDAI RAC 1. WHY???.

The new EP 385-XX will consider 20ml of CWM as RCWM. I do not think this site should be NDAI'd. Confirmation borings would permanent answer the question as to whether it's HTW or CWM. (KKM)

I have QC'd this document and it appears the review process was followed. The statement about the 20ml of agent being considered RCWM is potentially a correct statement however at the present it is not. If that is the foundation for the conflict, then the conflict should be resolved. 3 June 2002, Hank Hubbard

Additional Comments: